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National Cable Television Association

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December 16, 1994

Mr. William F. Caton
Secretary
Federal Communications Commission
1919 M Street N.W.
Room 222
Washington, D. C. 20054

Re: Ex Parte Demonstration on Equipment Compatibility
ET Docket No. 93-7

Dear Mr. Caton:

Pursuant to section 1.1200 et seq. of the Commission's rules, this is to advise that on Thursday, December 15, 1994, representatives of the National Cable Television Association conducted a demonstration for the Office of Engineering and Technology of the infrared pass-through approach to achieving long-term compatibility between cable systems and consumer electronics equipment. The following OET officials attended the demonstration: Richard Smith,. Bureau Chief; Bruce Franca, Deputy Chief Engineer; Steven Kaminer, Legal Counsel; Alan Stillwell, Economic Advisor. Mary McManus, Legal Advisor to Commissioner Ness, also attended.

The cable industry was represented by Wendell Bailey, Vice President, Science and Technology, NCTA; Ted Hartson, Vice President and Chief Engineer, Post-Newsweek Cable; Walter Ciciora, NCTA consultant and Co-Chair of the Cable-Consumer Electronics Advisory Group.

Please file this letter and the attached documents which was provided at the demonstration in the above-captioned proceeding.

Sincerely,

Loretta P. Polk

Attachment

A FLEXIBLE APPROACH TO COMPATIBILITY BETWEEN CABLE SYSTEMS AND CONSUMER ELECTRONICS EQUIPMENT

Ex parte presentation by the
National Cable Television Association
December 15, 1994

WHAT WE HAVE HERE
IS
A FAILURE TO COMMUNICATE*

*Cool Hand Luke

OVERVIEW

- **FCC determined that effective compatibility will be achieved through use of a standard "decoder interface connector" in future "cable ready" equipment.**

- **Cable Industry has sought an inter-operable, fully functional and consumer-friendly plug-in decoder module to maximize consumer choice from all service providers.**

OVERVIEW

- **Consumers need to be able to 'talk' to the services entering the home.**
- **The pathway for communication today is infra-red.**
- **A simple logical solution exists utilizing today's infra-red pathway while providing for future services and preventing premature obsolescence of televisions.**

BACKGROUND

- **Most modern television receivers rely on infra-red (IR) remote control.**

- **IR has been in wide use for more than twenty years and is a cheap and effective way to communicate from the couch to the television.**

Many things in today's home also use infra-red remote control, such as:

- **home entertainment systems**
- **video cassette recorders**
- **cable television set-top converters**

Most IR signals operate on the same wavelength or "color". They avoid interfering with each other by unique codes.

The signal sent from a remote control is similar to a flashlight sending morse code.

Televisions, VCR's, and other electronic equipment are constantly bombarded with IR signals from:

- **room lights**
- **the sun**
- **non-relevant IR commands**

Signal processing equipment within the television recognizes its own commands and responds to them. Irrelevant commands are ignored.

But wait a minute...

"My stereo remote turns off my television set."

Sometimes different manufacturers will inadvertently adopt the same code sequence for entirely different purposes.

CURRENT ISSUE

So what's the issue between consumer electronics manufacturers and the cable television industry?

- **Future "cable ready" televisions will have "*set-back*" boxes connected to the interface to decode services and provide other features.**

- **These devices will be the last link in the delivery of programming and other services via Cable, Direct Broadcast Satellite, and Video Dial Tone to the consumer's television.**

The consumer needs a way to send commands from the couch to these new boxes. And for maximum effectiveness the message should be forwarded unopened and uncensored by the television receiver.

Delivering the control message as soon as possible means faster response time for features such as advanced menus and games.

Many of the new services offer a highly specialized look and feel of operation to insure maximum user convenience.

A stable unrestricted pathway between the couch and set-back devices is essential for consumer satisfaction.

The Consumer Electronics (CE) Industry proposals refuse to discuss this total path.

They will tell us what comes out but won't discuss what goes in.

Why is this so important?

Some consumers don't want boxes on their televisions. They want them out of sight.

Hidden boxes still need to see their IR command signals.

The idea of a separate IR receiver connected by a wire, sometimes called a "kilroy module", is clumsy and impractical.

Set-back modules permit users to customize their needs with boxes providing the features and services they select.

Additionally, set-back modules will permit better interoperability between multiple service video providers and consumer electronic devices.

The IR command set proposed by the CE Industry is:

- **very limited in scope**
- **does not deal with how the commands get to the TV**
- **will impede consumer access to services in the future**

Even today's commands may become obsolete as new features and services emerge.

Does this mean a remote control with 256 buttons?

HARDLY!

The CE Industry equates command codes to buttons on a remote control. But a rich command set simply means designers of feature boxes will be free to use only the "*buttons*" necessary for the *look and feel* desired in their products.

A limited IR command set is like a 1950 dictionary. You can find "color" and "television" or "space" and "shuttle", but the dictionary was written before color televisions and space shuttles existed.

IR pass through capability is like the alphabet. New ideas and commands may be expressed without being blocked by a limited command set.

IR pass through enables consumers to send the raw IR data from the remote control to set-back feature boxes and thereby allows them to control all present and future functions of "cable ready" equipment.

Yet the CE Industry alleges that IR pass through will cause chaos because devices won't know what to do with strange codes.

This claim is baseless.

Strange codes are already sharing the air space between the couch and the TV whenever multiple IR devices are operating in the same room.

Manufacturers and the pressure of the marketplace have already provided effective isolation between IR signaling codes.

Sending IR signals to set-back boxes is cheap and easy, less than 50 cents in most current TV's.

But what if new "cable ready" televisions don't use IR commands (like voice or touch screen)? A separate IR path may be built in for less than an additional $1.00.

And these additional components are only needed in sets that are "cable ready".